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Date: June 22, 2015

Kathy Johnson Forest Practices Chair Pilchuck Audubon Society 1429 Avenue D. PMB 198 Snohomish, WA 98290

Dear Ms. Johnson:

Thank you for submitting comments on the Explanation of Significant Differences and the Workplan/Design Drawings for the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) Removal Action at the Monte Cristo Mining Area. Your comments are below with my responses following each comment.

C1. This latest plan does almost nothing to alleviate serious concerns that we have expressed since the inception of the remediation proposal. Both the environment and human health would be better protected by leaving the area undisturbed or using more conservative methods such as capping the waste in place.

R1. Noted.

- C2. The new plan for crossing Glacier Creek with a temporary log stringer bridge is an improvement over the previous plan for gravel fill and culverts, but still has potential to deliver large amounts of sediment, petroleum products and other pollutants (not to mention toxic waste spilling from trucks as they cross) into this valuable Bull Trout habitat.
- R2. Care will be taken to ensure that no material is spilled from the truck moving across the temporary Glacier Creek crossing, such as only filling the trucks 2/3 full or isolating the material with tarps. Equipment working at the site will be inspected to ensure no engine or other leaks of petroleum products are occurring.
- C3. We approve of the decision of the US Forest Service (USFS) to reduce work within the Henry M. Jackson Wilderness Area. We agree that the limited human access and adverse impacts to the wilderness that would be caused by remediation at the Sidney and Pride of the Mountains mines do not justify cleanup efforts there. However, these same arguments also apply to the Rainy, New Discovery, Mystery #3 and Justice Mines. Although somewhat more accessible to the public, the other remediation sites have also remained undisturbed for a century and are now covered with duff and vegetation. Disturbing this cover will only release more toxins to Glacier Creek and increase the risk of public exposure to hazardous materials. Furthermore, creating access to the Rainy Mine involves significant environmental risk due to the route traversing avalanche slopes and its proximity to Glacier Creek.





- R3. No work is planned for the New Discovery Mine, situated in Glacier Basin within the HMJ Wilderness. Neither the Rainy, Mystery #3 or Justice Mines are located within the HMJ Wilderness.
- C4. The workplan design drawings and maps do not include the HMJ Wilderness boundary. This must be located both on paper, and by a licensed land surveyor on the ground to prevent accidental unauthorized incursion into the wilderness area. Private property lines in the vicinity of work areas must be similarly marked, and permission for access must be obtained from private property owners prior to commencement of work.
- R4. Drawings that include the Wilderness boundary will be provided to the contractor. The distance from work areas outside the Wilderness to the boundary is on the order of thousands of feet and a resurvey of the boundary would be excessive and is not necessary. The Wilderness boundary is located on very steep slopes inaccessible via equipment and there is essentially no potential for an accidental incursion.

Private property corners have been staked and the Washington State Department of Ecology is currently in the process of obtaining access to private property that is situated within the work areas described in the Workplan.

- C5. We continue to have grave concerns about the adverse effects of the hazardous waste repository on human health, wildlife habitat and water quality in the nearby Sauk River. The removal of hundred-year old trees, duff and other vegetation will degrade habitat, as well as exposing soils naturally containing arsenic levels (38.9 mg/kg) that exceed those allowed by the Model Toxics Control Act (20 mg/kg, p. 4, MCMA-Removal Action Work Plan and Design Drawings, April 2015).
- R5. No material meeting the criteria of hazardous waste under the Resource Conservation and Recovery Act (RCRA) or state-listed Dangerous Waste will be placed in the repository. The MTCA concentrations included in the Workplan were for reference only and those criteria do not apply to the MCMA.
- C6. The placement of hazardous materials into this location directly adjacent to the popular hiking route into Monte Cristo and immediately uphill from the South Fork Sauk River will endanger human safety as well as Endangered Species Act listed Bull Trout. In this area of high rainfall the risk of failure is magnified, and increased further by the lack of access during the winter months. The new repository design, lacking a bottom liner, adds to these concerns.

R6. Noted.

- C7. The workplan does not specify where the excavated soil will be placed during the creation of the repository, nor how it will be prevented from contributing toxins and sediment into the adjacent South Fork Sauk River. The proposal to use this toxic material to cover the mine remediation locations is another concern, since this freshly disturbed soil will be more likely to leach heavy metals into Glacier Creek or endanger hikers in the area.
- R7. The native soil excavated to create the repository will be stockpiled at the borrow area north of the repository site. The native soil is not "toxic" as indicated by Toxicity Characteristic Leaching Potential (TCLP) data. The native soil does exhibit elevated levels of metals compared to a state-wide average but this is to be expected in a highly mineralized mining areas such as Monte Cristo. The concentrations of metals in the native soil at the repository site are consistent with other background soil metals data for the MCMA.

C8. Critical habitat for Marbled Murrelets and Spotted Owls has already been degraded by the removal of mature forest to build a new access route through an inventoried roadless area. Rather than leaving the future disposition of this road to the discretion of the USFS, it should be removed and replanted with native species after the project is finished.

R8. Noted.

- C9. The USFS has not yet completed consultation with the US Fish and Wildlife Service (FWS) on the changes proposed in this workplan. A Biological Opinion (BO) has yet to be issued by this agency, yet work is moving forward without it. The proposed helicopter-landing site is located within both an Inventoried Roadless Area and Marbled Murrelet Critical Habitat, and will likely necessitate the felling of additional 100-year old trees to accommodate the large helicopters that will be used. In addition to the tremendous noise that these aircraft will generate, the rotor wash will be strong enough to blow murrelet chicks out of the nest. The contractor has previously violated USFWS-mandated work windows designed to reduce impacts on Marbled Murrelets while building the access road in this area, and we are concerned that this conduct may be repeated. Of course, murrelet chicks remain in the nest at all times, so observing work windows will not be sufficient in any case to protect them from extreme noise and helicopter-generated wind. (Please see the attached table from the USFWS concerning helicopter noise disturbance for spotted owls and marbled murrelets).
- R9. The Forest Service has re-initiated consultation with FWS concerning the use of the first clearing for helicopter refueling and is awaiting their response. This issue does not preclude work on other phases of the project from continuing.
- C10. The contractor, Cascade Earth Sciences, does plan to monitor noise as required in the earlier USFWS BO, using a handheld digital sound level meter from Radio Shack. We question the suitability of this type of monitor, and whether the personnel performing this monitoring will have the appropriate expertise to accomplish this accurately. Individual sound meters measure different frequencies of sound, not all of which are heard by Marbled Murrelets. Furthermore, we question the validity of measurements made on the ground when nesting murrelets are typically much higher in the forest canopy. Sound often travels differently in different directions, depending on vegetation and topographical features. Most importantly, the threshold for disturbance is listed at 92 db. But increases of 20 db above background levels are considered a "take" by the USFWS according to a memorandum issued by that agency in July 2006.
- R10. The noise monitoring equipment and parameters are implemented as described in the Biological Opinion issued by FWS.
- C11. The "monitoring program" also calls for disposal of refuse every 45 days to discourage corvid populations, which prey on Marbled Murrelets. This is not frequent enough to be effective, especially during the summer when warm temperatures encourage bacterial growth and odors.
- R11. The 45-day interval stipulated in the 2011 Biological Opinion issued by the FWS refers to collection and disposal of trash and debris found on the work site and extends 2 years after construction. Work crews are instructed to dispose of waste, trash and debris properly and to collect any waste, trash or debris noticed on a daily basis.

- C12. The workplan calls for the creation of a drainfield for disposal of graywater generated at the campground, but provides no location, detailed drawings or specifications for this facility. Furthermore, it is not clear whether the USFS has obtained the necessary permits from the Snohomish County Health District for this drainfield.
- R12. The Forest Service is implementing this Removal Action under the authority it holds for CERCLA action on National Forest lands. Accordingly, county permits are not required. The graywater drainfield will be situated north of the existing campground footprint in an area of low shrubs and grass. The feature will be removed as part of demobilization and the area reclaimed.
- C13. In conclusion, the proposed workplan reinforces the concerns that we have held from the outset about this remediation project. We maintain that the Removal Action, if carried out as planned, will increase heavy metal contamination and sedimentation of Glacier Creek and the North Fork Sauk River, putting endangered Bull Trout as well as human beings at risk. Furthermore, it will likely cause additional pollution from petroleum products and other materials related to operating heavy equipment in this remote area. The noise and loss of forest habitat will adversely affect threatened Marbled Murrelets. In addition, it will degrade critical fish and wildlife habitat, destroy irreplaceable historical structures, and ruin the natural beauty of this area that has come so far to heal itself in the last century.
- R13. Noted. Bull Trout are currently listed under the Endangered Species Act as "Threatened".
- C14. We feel that the goals of reducing toxic pollution and protecting human health could best be served by far less invasive procedures such as capping exposed waste piles. If the USFS proceeds with the remediation as planned, however, an independent observer should be allowed access to the site to document contractor compliance.
- R14. Noted. A site tour was provided to you on 2 June 2015 and additional visits can be scheduled as the project moves forward.

Sincerely,

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JOSEPH GIBBENS, PE CERCLA On-Scene Coordinator

Cc: Zach Radmen, U.S. Fish and Wildlife Services
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